

ABSTRACT

The present invention provides a system and method of detecting a process failure and a network failure in a distributed system. The distributed system includes a plurality of processes, each executing on a host, operable to transmit messages (i.e., heartbeats) to each other on a network. A process in the system is operable to execute a process failure algorithm for detecting failure of a process in the system. The process failure algorithm includes calculating a difference in the period of time to receive a heartbeat from a first processes and a period of time to receive a heartbeat from a second process in the system. If the difference exceeds a process failure threshold, the second process is suspected of failing. A process in the system is also operable to execute a network failure algorithm for detecting failure of a network connecting a plurality of hosts in the system. The network failure algorithm includes detecting receipt of a heartbeat from any one of a plurality of processes in the system within a network failure time limit. If a heartbeat is not received prior to the expiration of the network failure time limit, the network in the system is suspected of failing.